

IN THE CLAIMS:

This listing of the claims will replace all prior versions and listings of the claims in the application:

1. (Currently Amended) A TDM communications network resource usage control system, comprising:

a plurality of servers in the TDM communications network adapted to execute supplementary communications service requests;

a monitoring unit connected to each of said plurality of servers to receive and decode supplementary service information for the supplementary communications service being requested; and

a control program responsive to said monitor to select which of said plurality of servers will execute said communications services;

wherein at least one of said plurality of servers is adapted to intercept a supplementary communications service request to determine whether execution of said supplementary communications service request is carried out by a server other than an original requested server, perform a link optimization based on a type of supplementary service being requested and redirect said supplementary service communications request to said other server over the TDM communications network.

2. (Original) The system as recited in claim 1, wherein said supplementary communications services include redirection services.

3. (Original) The system as recited in claim 2, wherein said redirection services includes call forwarding.

4. (Original) The system as recited in claim 2, wherein said redirection services include call transfer.

5. (Currently Amended) A communications network resource usage optimization system in an interconnected TDM network system, comprising:

a plurality of servers in the interconnected TDM network system adapted to execute supplementary communications service requests;

a monitoring unit connected to each of said plurality of servers to receive and decode supplementary service information for the supplementary communications services being requested; and

a control program responsive to said monitor decoding supplementary service information adapted to perform a link optimization based on a type of supplementary service being requested and select which of said plurality of servers will execute said communications services, said control program further enabling said optimization system only under predetermined conditions;

wherein at least one of said plurality of servers comprises an intervening server and is adapted to intercept a supplementary communications service request to determine whether execution of said supplementary communications service request is carried out by a server other than an original requested server and redirect said supplementary service communications request to said other server over the interconnected TDM network system;

wherein an optimization comprises re-using a predetermined number of links in an original connection.

6. (Original) The system as recited in claim 5, wherein said control program further includes means for disabling said optimization system under predetermined conditions.

7. (Previously Presented) The system as recited in claim 6, wherein said disabling means is responsive to a recall mechanism for failed service requests.

8. (Original) The system as recited in claim 5, wherein said optimization system includes means for customizing one or more operating parameters of said optimization system.

9. (Currently Amended) A method for controlling communications network resource usage in a TDM communications network, comprising:

enabling supplementary communications service requests;

intercepting said supplementary communications service requests at an intervening server before execution by a destination server;

receiving and decoding supplementary service information for said supplementary communications service being requested;

performing a link optimization based on a type of supplementary service being requested and selecting which of said one or more servers will execute said communications services; and

redirecting said supplementary service communications request to said selected server over the TDM communications network.

10. (Original) The method of claim 9, further including the step of enabling said selecting step under predetermined conditions.

11. (Original) The method of claim 9, further including the step of disabling said selecting step under predetermined conditions.

12. (Original) The method of claim 9, further including the step of customizing one or more operating parameters of the communications controlling method.

13. (Currently Amended) A telecommunications server in a TDM communications network, comprising:

- a feature processing module for handling supplemental services; and
- a network services control system for supervising handling of said supplemental services, and adapted to interface to trunks coupled to said server;

said network services control system including

- one or more device/trunk handlers;
- a monitoring and statistics unit for monitoring said one or more device/trunk handlers for supplementary service signals;
- a database system adapted to store a list of one or more servers' addresses, listed in order of redirection priority, that are available in the TDM communications network;

wherein said network services control system is adapted to intercept and redirect supplementary service functions for handling to another server over the TDM communications network and said monitoring and statistics unit is adapted to access said database when a supplementary service signal is detected and, depending on a corresponding entry in said database, acknowledge, reject or block the corresponding supplementary service.

14. (Previously Presented) A telecommunications server as recited in claim 13, further including a database access program including a schedule routine for waking said network services control system according to predetermined criteria.

15. (Previously Presented) A telecommunications server as recited in claim 13, wherein said database includes a service index pointer identifying a type of service being requested.

16. (Previously Presented) A telecommunications server as recited in claim 14, said predetermined criteria including at least one of time of day, trunk costs, or priority.

17. (Previously Presented) A telecommunications server as recited in claim 16, said network services control system adapted to redirect a supplemental service request to another server based on a type of service being requested.

18. (Previously Presented) A telecommunications server as recited in claim 13, further including a network services control system coupled at every server interface.

19. (Previously Presented) A telecommunications server as recited in claim 13, further including a network services control system coupled at a connection of a primary rate interface or a basic rate interface.